REMARKS

Claims 1-17 and 19-21 remain pending in the application, claim 18 having been canceled upon entry of this amendment. Independent claims 1, 10 and 17 have been carefully amended and reconsideration is courteously requested.

As an initial matter, reconsideration of the rejection under 35 U.S.C. 112 is respectfully requested. The term "undercut" in claims 8, 15 and 19 refers to an undercut in the through passageway as recited in these claims. This undercut is described throughout the application, including, for example, on page 18, lines 5-6 where it is recited that the lip 29b presents an undercut area. The undercut area is also described on page 21, lines 12-15 where it is mentioned that restorative material 28b in the undercut areas beneath the lip 28b hardens to provide a mechanical bond. The undercut is shown beneath lip 29b in Figs. 6, 7 and 8.

The term "undercut" is defined in numerous dictionaries. For example, the *Webster's New Collegiate Dictionary* (G.&C. Marriam Co.; 1980) provides as one definition for the term "undercut" the following: "the action or result of cutting away from the underside or lower part of something". Consequently, it is believed that this term is well known in the art and that the specification as filed provides proper support for the use of this term in the claims.

Independent claims 1 and 10 have been amended to recite that the chemical bond that bonds the support section to the milling section is a direct chemical bond, and that this direct chemical bond is free of divergent chemistry. A definition of the phrase "divergent chemistry" is set out on page 12, lines 1-3 of the application. As described, "divergent chemistry" means a composition containing effective amounts of one or more adhesive components that are not present in the restorative material or the material of the second mold component 14. Examples are also provided in the specification.

The direct chemical bond as described in claims 1 and 10 is an advantage in that the use of an additional adhesive component is unnecessary. Additionally, the direct chemical bond greatly reduces the likelihood that the milling section is detached from the support section during a machining operation. The resultant assembly provides an enhanced resistance to fracture during machining of the milling section, and safely resists forces exerted by a milling tool in lateral directions so that the dental prosthetic can be fully machined.

None of the references of record teach or even remotely suggest this concept. In the patent to Eidenbenz et al., U.S. No. 5,342,696, the patentee indicates that the support 3 is secured to blank body 2 preferably by gluing (see column 2, lines 17-19). As such, the patentee is introducing a third component (i.e., glue) to bond the blank body 2 to the support 3. There is no teaching of a direct chemical bond that is free of divergent chemistry.

Similarly, in U.S. Patent No. 6,485,305 to Pfeiffer, the patentee recites that retainer projection 2 is secured to body 1 by gluing (see column 3, lines 7-11). Again, there is no teaching in this reference of a direct chemical bond that is free of divergent chemistry, and the benefits of applicant's invention are not recognized.

The subject matter of the claims dependent on independent claims 1 and 10 is also not anticipated or rendered obvious in view of the cited references. For example, and with respect to claim 2, none of the references teach that the milling section is made of a dental restorative material that comprises a polymerizable resin, where the dental restorative material is bonded to a support section by a direct chemical bond that is free of divergent chemistry.

Independent claim 17 has been amended to include the limitations of former dependent claim 18. Independent claim 17 also now recites that the flange presents an outer cylindrical calibration surface having a dimensional tolerance within plus or minus 0.2 mm. Antecedent basis for the language added to claim 17 can be found throughout the specification as filed, including, for example, in the text bridging page 16, line 30 to page 17, line 7.

The subject matter of amended claim 17 provides a significant advantage, in that the calibration surface of the flange is securely locked in spatial relationship to the milling section since a portion of the hardened restorative material that comprises the milling section also extends through a through passageway in the support section. This not only provides a firm coupling between the milling section and the support section, but also enables the calibration surface to be located in a position remote from the milling section during a machining operation such that access is facilitated.

None of the references of record teach the concepts set out in amended claim 17. For example, in the '305 Pfeiffer patent, the blank 10' shown in Fig. 2 includes a peg-shaped continuation 1a that is provided with a coating 4 of tenacious material such as plastic or metal, as described in column 3, lines 45-53. It is indicated that the coating or sleeve lie in the range of ±

0.2 mm. Consequently, the coating is very thin and does not provide significant protection for enabling the blank member 1' to resist fracture when exposed to cantilever forces such as during a milling operation. Instead, it is believed that this thin coating 4 serves to provide resistance to crushing forces when placed in the jaws of a milling machine.

Moreover, the '305 patent includes a set part 3 as a calibration surface, as described in column 3, lines 24-40. The set part 3 is located on top of the mill body 1. There is no teaching in this reference of a support section having a through passageway, wherein the support section also includes a flange that presents a calibration surface.

Similarly, the references of record do not disclose or render obvious in any hypothetical combination the subject matter of dependent claims 19-21.

For the foregoing reasons, it is believed that this application is in condition for allowance and such action is courteously requested. However, in the event questions remain, the Examiner is invited to contact the undersigned by telephone at the phone number set out below.

Respectfully submitted,

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